TACGCCAAGC TCGAAATTAA CCCTCACTAA AGGGAACAAA AGCTGGAGCT

CCACCGCGGT GGCGGCCGCT CTAGAACTAG TGGATCCCCC GGGCTGCAGG

AATTCGAATT CTCATAACCT ATGACTAGGA CGGGAAGAGG AAGCACTGCC

TTTACTTCAG TGGGAATCTC GGCCTCAGCC TGCAAGCCAA GTGTTCACAG

TGAGAAAAGC AAGAGAATAA GCTAATACTC CTGTCCTGAA CAAGGCAGCG

GCTCCTTGGT AAAGCTACTC CTTGATCGAT CCTTTGCACC GGATTGTTCA

AAGTGGACCC CAGGGGAGAA GTCGGAGCAA AGAACTTACC ACCAAGCAGT

CCAAGAGGCC CAGAAGCAAA CCTGGAGGTG AGACCCAAAG AAAGCTGGAA

CCATGCTGAC TTTGTACACT GTGAGGACAC AGAGTCTGTT CCTGGAAAGC

CCAGTGTCAA CGCAGATGAG GAAGTCGGAG GTCCCCAAAT CTGCCGTGTA

TGTGGGGACA AGGCCACTGG CTATCACTTC AATGTCATGA CATGTGAAGG

ATGCAAGGGC TTTTTCAGGA GGGCCATGAA ACGCAACGCC CGGCTGAGGT

GCCCCTTCCG GAAGGGCGCC TGCGAGATCA CCCGGAAGAC CCGGCGACAG

TGCCAGGCCT GCCGCCTGCG CAAGTGCCTG GAGAGCGGCA TGAAGAAGGA

GATGATCATG TCCGACGAGG CCGTGGAGGA GAGGCGGGCC TTGATCAAGC

GGAAGAAAAG TGAACGGACA GGGACTCAGC CACTGGGAGT GCAGGGGCTG

ACAGAGGAGC AGCGGATGAT GATCAGGGAG CTGATGGACG CTCAGATGAA

AACCTTTGAC ACTACCTTCT CCCATTTCAA GAATTTCCGG CTGCCAGGGG

TGCTTAGCAG TGGCTGCGAG TTGCCAGAGT CTCTGCAGGC CCCATCGAGG

GAAGAAGCTG CCAAGTGGAG CCAGGTCCGG AAAGATCTGT GCTCTTTGAA

GGTCTCTCTG CAGCTGCGGG GGGAGGATGG CAGTGTCTGG AACTACAAAC

CCCCAGCCGA CAGTGGCGGG AAAGAGATCT TCTCCCTGCT GCCCCACATG

GCTGACATGT CAACCTACAT GTTCAAAGGC ATCATCAGCT TTGCCAAAGT

CATCTCCTAC TTCAGGGACT TGCCCATCGA GGACCAGATC TCCCTGCTGA

FIG.1A

AGGGGGCCGC TTTCGAGCTG TGTCAACTGA GATTCAACAC AGTGTTCAAC

GCGGAGACTG GAACCTGGGA GTGTGGCCGG CTGTCCTACT GCTTGGAAGA

CACTGCAGGT GGCTTCCAGC AACTTCTACT GGAGCCCATG CTGAAATTCC

ACTACATGCT GAAGAAGCTG CAGCTGCATG AGGAGGAGTA TGTGCTGATG

CAGGCCATCT CCCTCTTCTC CCCAGACCGC CCAGGTGTGC TGCAGCACCG

CGTGGTGGAC CAGCTGCAGG AGCAATTCGC CATTACTCTG AAGTCCTACA

TTGAATGCAA TCGGCCCCAG CCTGCTCATA GGTTCTTGTT CCTGAAGATC

ATGGCTATGC TCACCGAGCT CCGCAGCATC AATGCTCAGC ACACCCAGCG

GCTGCTGCGC ATCCAGGACA TACACCCCTT TGCTACGCCC CTCATGCAGG

AGTTGTTCGG CATCACAGGT AGCTGAGCGG CTGCCCTTGG GTGACACCTC

CGAGAGGCAG CCAGACCCAG AGCCCTCTGA GCCGCCACTC CCGGGCCAAG

ACAGATGGAC ACTGCCAAGA GCCGACAATG CCCTGCTGGC CTGTCTCCCT

AGGGAATTCC TGCTATGACA GCTGGCTAGC ATTCCTCAGG AAGGACATGG

GTGCCCCCCA CCCCCAGTTC AGTCTGTAGG GAGTGAAGCC ACAGATTCTT

ACGTGGAGAG TGCACTGACC TGTAGGTCAG GACCATCAGA GAGGCAAGGT

TGCCCTTTCC TTTTAAAAGG CCCTGTGGTC TGGGGAGAAA TCCCTCAGAT

CCCACTAAAG TGTCAAGGTG TGGAAGGGAC CAAGCGACCA AGGATAGGCC

ATCTGGGGTC TATGCCCACA TACCCACGTT TGTTCGCTTC CTGAGTCTTT

TCATTGCTAC CTCTAATAGT CCTGTCTCCC ACTTCCCACT CGTTCCCCTC

CTCTTCCGAG CTGCTTTGTG GGCTCCAGGC CTGTACTCAT CGGCAGGTGC

ATGAGTATCT GTGGGAGTCC TCTAGAGAGA TGAGAAGCCA GGAGGCCTGC

ACCAAATGTC AGAAGCTTGG CATGACCTCA TTCCGGCCAC ATCATTCTGT

GTCTCTGCAT CCATTTGAAC ACATTATTAA GCACCGATAA TAGGTAGCCT

FIG.1B

GCTGTGGGGT ATACAGCATT GACTCAGATA TAGATCCTGA GCTCACAGAG

TTTATAGTTA AAAAAACAAA CAGAAACACA AACAATTTGG ATCAAAAGGA

GAAATGATAA GTGACAAAAG CAGCACAAGG AATTTCCCTG TGTGGATGCT

GAGCTGTGAT GGCGGGCACT GGGTACCCAA GTGAAGGTTC CCGAGGACAT

GAGTCTGTAG GAGCAAGGGC ACAAACTGCA GCTGTGAGTG CGTGTGTGTG

ATTTGGTGTA GGTAGGTCTG TTTGCCACTT GATGGGGCCT GGGTTTGTTC

CTGGGGCTGG AATGCTGGGT ATGCTCTGTG ACAAGGCTAC GCTGACAATC

AGTTAAACAC ACCGGAGAAG AACCATTTAC ATGCACCTTA TATTTCTGTG

TACACATCTA TTCTCAAAGC TAAAGGGTAT GAAAGTGCCT GCCTTGTTTA

TAGCCACTTG TGAGTAAAAA TTTTTTTGCA TTTTCACAAA TTATACTTTA

TATAAGGCAT TCCACACCTA AGAACTAGTT TTGGGAAATG TAGCCCTGGG

TTTAATGTCA AATCAAGGCA AAAGGAATTA AATAATGTAC TTTTGGCTAG

AGGGGTAAAC TTTTTTGGCC TTTTTCTGGG GAAAATAATG TGGGGGTGTG

GGAATTCGAA TTCGATATCA AGCTTATCGA TACCGTCGAC CTCGAGGGGG

GGCCCGGTAC CCAATTCGCC CTATAGTGAG TCGTATTACA ATT (SEQ ID NO:1)

FIG.1C

```
   1 TACGCCAAGCTCGAAATTAACCCTCACTAAAGGGAACAAAAGCTGGAGCTCCACCGCGGT  60

  61 GGCGGCCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGAATTCTCATAACCT 120

 121 ATGACTAGGACGGGAAGAGGAAGCACTGCCTTTACTTCAGTGGGAATCTCGGCCTCAGCC 180

 181 TGCAAGCCAAGTGTTCACAGTGAGAAAAGCAAGAGAATAAGCTAATACTCCTGTCCTGAA 240

 241 CAAGGCAGCGGCTCCTTGGTAAAGCTACTCCTTGATCGATCCTTTGCACCGGATTGTTCA 300
                                       S  I  L  C  T  G  L  F  K

 301 AAGTGGACCCCAGGGGAGAAGTCGGAGCAAAGAACTTACCACCAAGCAGTCCAAGAGGCC 360
       V  D  P  R  G  E  V  G  A  K  N  L  P  P  S  S  P  R  G  P

 361 CAGAAGCAAACCTGGAGGTGAGACCCAAAGAAAGCTGGAACCATGCTGACTTTGTACACT 420
       E  A  N  L  E  V  R  P  K  E  S  W  N  H  A  D  F  V  H  C

 421 GTGAGGACACAGAGTCTGTTCCTGGAAAGCCCAGTGTCAACGCAGATGAGGAAGTCGGAG 480
       E  D  T  E  S  V  P  G  K  P  S  V  N  A  D  E  E  V  G  G

 481 GTCCCCAAATCTGCCGTGTATGTGGGGACAAGGCCACTGGCTATCACTTCAATGTCATGA 540
       P  Q  I  C  R  V  C  G  D  K  A  T  G  Y  H  F  N  V  M  T

 541 CATGTGAAGGATGCAAGGGCTTTTTCAGGAGGGCCATGAAACGCAACGCCCGGCTGAGGT 600
       C  E  G  C  K  G  F  F  R  R  A  M  K  R  N  A  R  L  R  C

 601 GCCCCTTCCGGAAGGGCGCCTGCGAGATCACCCGGAAGACCCGGCGACAGTGCCAGGCCT 660
       P  F  R  K  G  A  C  E  I  T  R  K  T  R  R  Q  C  Q  A  C

 661 GCCGCCTGCGCAAGTGCCTGGAGAGCGGCATGAAGAAGGAGATGATCATGTCCGACGAGG 720
       R  L  R  K  C  L  E  S  G  M  K  K  E  M  I  M  S  D  E  A

 721 CCGTGGAGGAGAGGCGGGCCTTGATCAAGCGGAAGAAAAGTGAACGGACAGGGACTCAGC 780
       V  E  E  R  R  A  L  I  K  R  K  K  S  E  R  T  G  T  Q  P

 781 CACTGGGAGTGCAGGGGCTGACAGAGGAGCAGCGGATGATGATCAGGGAGCTGATGGACG 840
       L  G  V  Q  G  L  T  E  E  Q  R  M  M  I  R  E  L  M  D  A

 841 CTCAGATGAAAACCTTTGACACTACCTTCTCCCATTTCAAGAATTTCCGGCTGCCAGGGG 900
       Q  M  K  T  F  D  T  T  F  S  H  F  K  N  F  R  L  P  G  V

 901 TGCTTAGCAGTGGCTGCGAGTTGCCAGAGTCTCTGCAGGCCCCATCGAGGGAAGAAGCTG 960
       L  S  S  G  C  E  L  P  E  S  L  Q  A  P  S  R  E  E  A  A
```

FIG.2A

961 CCAAGTGGAGCCAGGTCCGGAAAGATCTGTGCTCTTTGAAGGTCTCTCTGCAGCTGCGGG 1020
K W S Q V R K D L C S L K V S L Q L R G

1021 GGGAGGATGGCAGTGTCTGGAACTACAAACCCCCAGCCGACAGTGGCGGGAAAGAGATCT 1080
E D G S V W N Y K P P A D S G G K E I F

1081 TCTCCCTGCTGCCCCACATGGCTGACATGTCAACCTACATGTTCAAAGGCATCATCAGCT 1140
S L L P H M A D M S T Y M F K G I I S F

1141 TTGCCAAAGTCATCTCCTACTTCAGGGACTTGCCCATCGAGGACCAGATCTCCCTGCTGA 1200
A K V I S Y F R D L P I E D Q I S L L K

1201 AGGGGGCCGCTTTCGAGCTGTGTCAACTGAGATTCAACACAGTGTTCAACGCGGAGACTG 1260
G A A F E L C Q L R F N T V F N A E T G

1261 GAACCTGGGAGTGTGGCCGGCTGTCCTACTGCTTGGAAGACACTGCAGGTGGCTTCCAGC 1320
T W E C G R L S Y C L E D T A G G F Q Q

1321 AACTTCTACTGGAGCCCATGCTGAAATTCCACTACATGCTGAAGAAGCTGCAGCTGCATG 1380
L L L E P M L K F H Y M L K K L Q L H E

1381 AGGAGGAGTATGTGCTGATGCAGGCCATCTCCCTCTTCTCCCCAGACCGCCCAGGTGTGC 1440
E E Y V L M Q A I S L F S P D R P G V L

1441 TGCAGCACCGCGTGGTGGACCAGCTGCAGGAGCAATTCGCCATTACTCTGAAGTCCTACA 1500
Q H R V V D Q L Q E Q F A I T L K S Y I

1501 TTGAATGCAATCGGCCCCAGCCTGCTCATAGGTTCTTGTTCCTGAAGATCATGGCTATGC 1560
E C N R P Q P A H R F L F L K I M A M L

1561 TCACCGAGCTCCGCAGCATCAATGCTCAGCACACCCAGCGGCTGCTGCGCATCCAGGACA 1620
T E L R S I N A Q H T Q R L L R I Q D I

1621 TACACCCCTTTGCTACGCCCCTCATGCAGGAGTTGTTCGGCATCACAGGTAGCTGAGCGG 1680
H P F A T P L M Q E L F G I T G S (SEQ ID NO:2)

1681 CTGCCCTTGGGTGACACCTCCGAGAGGCAGCCAGACCCAGAGCCCTCTGAGCCGCCACTC 1740

1741 CCGGGCCAAGACAGATGGACACTGCCAAGAGCCGACAATGCCCTGCTGGCCTGTCTCCCT 1800

FIG.2B

1801	AGGGAATTCCTGCTATGACAGCTGGCTAGCATTCCTCAGGAAGGACATGGGTGCCCCCCA	1860
1861	CCCCCAGTTCAGTCTGTAGGGAGTGAAGCCACAGATTCTTACGTGGAGAGTGCACTGACC	1920
1921	TGTAGGTCAGGACCATCAGAGAGGCAAGGTTGCCCTTTCCTTTTAAAAGGCCCTGTGGTC	1980
1981	TGGGGAGAAATCCCTCAGATCCCACTAAAGTGTCAAGGTGTGGAAGGGACCAAGCGACCA	2040
2041	AGGATAGGCCATCTGGGGTCTATGCCCACATACCCACGTTTGTTCGCTTCCTGAGTCTTT	2100
2101	TCATTGCTACCTCTAATAGTCCTGTCTCCCACTTCCCACTCGTTCCCCTCCTCTTCCGAG	2160
2161	CTGCTTTGTGGGCTCCAGGCCTGTACTCATCGGCAGGTGCATGAGTATCTGTGGGAGTCC	2220
2221	TCTAGAGAGATGAGAAGCCAGGAGGCCTGCACCAAATGTCAGAAGCTTGGCATGACCTCA	2280
2281	TTCCGGCCACATCATTCTGTGTCTCTGCATCCATTTGAACACATTATTAAGCACCGATAA	2340
2341	TAGGTAGCCTGCTGTGGGGTATACAGCATTGACTCAGATATAGATCCTGAGCTCACAGAG	2400
2401	TTTATAGTTAAAAAAACAAACAGAAACACAAACAATTTGGATCAAAAGGAGAAATGATAA	2460
2461	GTGACAAAAGCAGCACAAGGAATTTCCCTGTGTGGATGCTGAGCTGTGATGGCGGGCACT	2520
2521	GGGTACCCAAGTGAAGGTTCCCGAGGACATGAGTCTGTAGGAGCAAGGGCACAAACTGCA	2580
2581	GCTGTGAGTGCGTGTGTGTGATTTGGTGTAGGTAGGTCTGTTTGCCACTTGATGGGGCCT	2640
2641	GGGTTTGTTCCTGGGGCTGGAATGCTGGGTATGCTCTGTGACAAGGCTACGCTGACAATC	2700
2701	AGTTAAACACACCGGAGAAGAACCATTTACATGCACCTTATATTTCTGTGTACACATCTA	2760
2761	TTCTCAAAGCTAAAGGGTATGAAAGTGCCTGCCTTGTTTATAGCCACTTGTGAGTAAAAA	2820
2821	TTTTTTTGCATTTTCACAAATTATACTTTATATAAGGCATTCCACACCTAAGAACTAGTT	2880
2881	TTGGGAAATGTAGCCCTGGGTTTAATGTCAAATCAAGGCAAAAGGAATTAAATAATGTAC	2940
2941	TTTTGGCTAGAGGGGTAAACTTTTTTGGCCTTTTTCTGGGGAAAATAATGTGGGGGTGTG	3000
3001	GGAATTCGAATTCGATATCAAGCTTATCGATACCGTCGACCTCGAGGGGGGGCCCGGTAC	3060
3061	CCAATTCGCCCTATAGTGAGTCGTATTACAATT (SEQ ID NO:1)	3093

FIG.2C

SILCTGLFKV DPRGEVGAKN LPPSSPRGPE ANLEVRPKES WNHADFVHCE

DTESVPGKPS VNADEEVGGP QICRVCGDKA TGYHFNVMTC EGCKGFFRRA

MKRNARLRCP FRKGACEITR KTRRQCQACR LRKCLESGMK KEMIMSDEAV

EERRALIKRK KSERTGTQPL GVQGLTEEQR MMIRELMDAQ MKTFDTTFSH

FKNFRLPGVL SSGCELPESL QAPSREEAAK WSQVRKDLCS LKVSLQLRGE

DGSVWNYKPP ADSGGKEIFS LLPHMADMST YMFKGIISFA KVISYFRDLP

IEDQISLLKG AAFELCQLRF NTVFNAETGT WECGRLSYCL EDTAGGFQQL

LLEPMLKFHY MLKKLQLHEE EYVLMQAISL FSPDRPGVLQ HRVVDQLQEQ

FAITLKSYIE CNRPQPAHRF LFLKIMAMLT ELRSINAQHT QRLLRIQDIH

PFATPLMQEL FGITGS (SEQ ID NO:2)

FIG.3

1 TCCATCCTAA TACGACTCAC TATAGGGCTC GAGCGGCCGC CCGGGCAGGT

51 CTTTTGGCCT GCTGGGTTAG TGCTGGCAGC CCCCTGAGGC CAAGGACAGC

101 AGCATGACAG TCACCAGGAC TCACCACTTC AAGGAGGGGT CCCTCAGAGC

151 ACCTGCCATA CCCCTGCACA GTGCTGCGGC TGAGTTGGCT TCAAACCATC

201 CAAGAGGCCC AGAAGCAAAC CTGGAGGTGA GACCCAAAGA AAGCTGGAAC

251 CATGCTGACT TTGTACACTG TGAGGACACA GAGTCTGTTC CTGGAAAGCC

301 CAGTGTCAAC GCAGATGAGG AAGTCGGAGG TCCCCAAATC TGCCGTGTAT

351 GTGGGGACAA GGCCACTGGC TATCACTTCA ATGTCATGAC ATGTGAAGGA

401 TGCAAGGGCT TTTTCAGGAG GGCCATGAAA CGCAACGCCC GGCTGAGGTG

451 CCCCTTCCGG AAGGGCGCCT GCGAGATCAC CCGGAAGACC CGGCGACAGT

501 GCCAGGCCTG CCGCCTGCGC AAGTGCCTGG AGAGCGGCAT GAAGAAGGAG

551 ATGATCATGT CCGACGAGGC CGTGGAGGAG AGGCGGGCCT TGATCAAGCG

601 GAAGAAAAGT GAACGGACAG GGACTCAGCC ACTGGGAGTG CAGGGGCTGA

651 CAGAGGAGCA GCGGATGATG ATCAGGGAGC TGATGGACGC TCAGATGAAA

701 ACCTTTGACA CTACCTTCTC CCATTTCAAG AATTTCCGGC TGCCAGGGGT

751 GCTTAGCAGT GGCTGCGAGT TGCCAGAGTC TCTGCAGGCC CCATCGAGGG

801 AAGAAGCTGC CAAGTGGAGC CAGGTCCGGA AAGATCTGTG CTCTTTGAAG

851 GTCTCTCTGC AGCTGCGGGG GGAGGATGGC AGTGTCTGGA ACTACAAACC

901 CCCAGCCGAC AGTGGCGGGA AAGAGATCTT CTCCCTGCTG CCCCACATGG

951 CTGACATGTC AACCTACATG TTCAAAGGCA TCATCAGCTT TGCCAAAGTC

1001 ATCTCCTACT TCAGGGACTT GCCCATCGAG GACCAGATCT CCCTGCTGAA

1051 GGGGGCCGCT TTCGAGCTGT GTCAACTGAG ATTCAACACA GTGTTCAACG

FIG.4A

1101 CGGAGACTGG AACCTGGGAG TGTGGCCGGC TGTCCTACTG CTTGGAAGAC

1151 ACTGCAGGTG GCTTCCAGCA ACTTCTACTG GAGCCCATGC TGAAATTCCA

1201 CTACATGCTG AAGAAGCTGC AGCTGCATGA GGAGGAGTAT GTGCTGATGC

1251 AGGCCATCTC CCTCTTCTCC CCAGACCGCC CAGGTGTGCT GCAGCACCGC

1301 GTGGTGGACC AGCTGCAGGA GCAATTCGCC ATTACTCTGA AGTCCTACAT

1351 TGAATGCAAT CGGCCCCAGC CTGCTCATAG GTTCTTGTTC CTGAAGATCA

1401 TGGCTATGCT CACCGAGCTC CGCAGCATCA ATGCTCAGCA CACCCAGCGG

1451 CTGCTGCGCA TCCAGGACAT ACACCCCTTT GCTACGCCCC TCATGCAGGA

1501 GTTGTTCGGC ATCACAGGTA GCTGAGCGGC TGCCCTTGGG TGACACCTCC

1551 GAGAGGCAGC CAGACCCAGA GCCCTCTGAG CCGCCACTCC CGGGCCAAGA

1601 CAGATGGACA CTGCCAAGAG CCGACAATGC CCTGCTGGCC TGTCTCCCTA

1651 GGGAATTCCT GCTATGACAG CTGGCTAGCA TTCCTCAGGA AGGACATGGG

1701 TGCCCCCCAC CCCCAGTTCA GTCTGTAGGG AGTGAAGCCA CAGATTCTTA

1751 CGTGGAGAGT GCACTGACCT GTAGGTCAGG ACCATCAGAG AGGCAAGGTT

1801 GCCCTTTCCT TTTAAAAGGC CCTGTGGTCT GGGGAGAAAT CCCTCAGATC

1851 CCACTAAAGT GTCAAGGTGT GGAAGGGACC AAGCGACCAA GGATAGGCCA

1901 TCTGGGGTCT ATGCCCACAT ACCCACGTTT GTTCGCTTCC TGAGTCTTTT

1951 CATTGCTACC TCTAATAGTC CTGTCTCCCA CTTCCCACTC GTTCCCCTCC

2001 TCTTCCGAGC TGCTTTGTGG GCTCCAGGCC TGTACTCATC GGCAGGTGCA

2051 TGAGTATCTG TGGGAGTCCT CTAGAGAGAT GAGAAGCCAG GAGGCCTGCA

2101 CCAAATGTCA GAAGCTTGGC ATGACCTCAT TCCGGCCACA TCATTCTGTG

2151 TCTCTGCATC CATTTGAACA CATTATTAAG CACCGATAAT AGGTAGCCTG

FIG.4B

2201 CTGTGGGGTA TACAGCATTG ACTCAGATAT AGATCCTGAG CTCACAGAGT

2251 TTATAGTTAA AAAAACAAAC AGAAACACAA ACAATTTGGA TCAAAAGGAG

2301 AAATGATAAG TGACAAAAGC AGCACAAGGA ATTTCCCTGT GTGGATGCTG

2351 AGCTGTGATG GCGGGCACTG GGTACCCAAG TGAAGGTTCC CGAGGACATG

2401 AGTCTGTAGG AGCAAGGGCA CAAACTGCAG CTGTGAGTGC GTGTGTGTGA

2451 TTTGGTGTAG GTAGGTCTGT TTGCCACTTG ATGGGGCCTG GGTTTGTTCC

2501 TGGGGCTGGA ATGCTGGGTA TGCTCTGTGA CAAGGCTACG CTGACAATCA

2551 GTTAAACACA CCGGAGAAGA ACCATTTACA TGCACCTTAT ATTTCTGTGT

2601 ACACATCTAT TCTCAAAGCT AAAGGGTATG AAAGTGCCTG CCTTGTTTAT

2651 AGCCACTTGT GAGTAAAAAT TTTTTTGCAT TTTCACAAAT TATACTTTAT

2701 ATAAGGCATT CCACACCTAA GAACTAGTTT TGGGAAATGT AGCCCTGGGT

2751 TTAATGTCAA ATCAAGGCAA AAGGAATTAA ATAATGTACT TTTGGCTAGA

2801 GGGGTAAACT TTTTTGGCCT TTTTCTGGGG AAAATAATGT GGGGGTGTGG

(SEQ ID NO:17)

FIG.4C

```
TCCATCCTAATACGACTCACTATAGGGCTCGAGCGGCCGCCCGGGCAGGTCTTTTGGCCT      60

GCTGGGTTAGTGCTGGCAGCCCCCTGAGGCCAAGGACAGCAGCATGACAGTCACCAGGAC     120
                                                  M  T  V  T  R  T
TCACCACTTCAAGGAGGGGTCCCTCAGAGCACCTGCCATACCCCTGCACAGTGCTGCGGC     180
 H  H  F  K  E  G  S  L  R  A  P  A  I  P  L  H  S  A  A  A

TGAGTTGGCTTCAAACCATCCAAGAGGCCCAGAAGCAAACCTGGAGGTGAGACCCAAAGA     240
 E  L  A  S  N  H  P  R  G  P  E  A  N  L  E  V  R  P  K  E

AAGCTGGAACCATGCTGACTTTGTACACTGTGAGGACACAGAGTCTGTTCCTGGAAAGCC     300
 S  W  N  H  A  D  F  V  H  C  E  D  T  E  S  V  P  G  K  P

CAGTGTCAACGCAGATGAGGAAGTCGGAGGTCCCCAAATCTGCCGTGTATGTGGGGACAA     360
 S  V  N  A  D  E  E  V  G  G  P  Q  I  C  R  V  C  G  D  K

GGCCACTGGCTATCACTTCAATGTCATGACATGTGAAGGATGCAAGGGCTTTTTCAGGAG     420
 A  T  G  Y  H  F  N  V  M  T  C  E  G  C  K  G  F  F  R  R

GGCCATGAAACGCAACGCCCGGCTGAGGTGCCCCTTCCGGAAGGGCGCCTGCGAGATCAC     480
 A  M  K  R  N  A  R  L  R  C  P  F  R  K  G  A  C  E  I  T

CCGGAAGACCCGGCGACAGTGCCAGGCCTGCCGCCTGCGCAAGTGCCTGGAGAGCGGCAT     540
 R  K  T  R  R  Q  C  Q  A  C  R  L  R  K  C  L  E  S  G  M

GAAGAAGGAGATGATCATGTCCGACGAGGCCGTGGAGGAGAGGCGGGCCTTGATCAAGCG     600
 K  K  E  M  I  M  S  D  E  A  V  E  E  R  R  A  L  I  K  R

GAAGAAAAGTGAACGGACAGGGACTCAGCCACTGGGAGTGCAGGGGCTGACAGAGGAGCA     660
 K  K  S  E  R  T  G  T  Q  P  L  G  V  Q  G  L  T  E  E  Q

GCGGATGATGATCAGGGAGCTGATGGACGCTCAGATGAAAACCTTTGACACTACCTTCTC     720
 R  M  M  I  R  E  L  M  D  A  Q  M  K  T  F  D  T  T  F  S

CCATTTCAAGAATTTCCGGCTGCCAGGGGTGCTTAGCAGTGGCTGCGAGTTGCCAGAGTC     780
 H  F  K  N  F  R  L  P  G  V  L  S  S  G  C  E  L  P  E  S

TCTGCAGGCCCCATCGAGGGAAGAAGCTGCCAAGTGGAGCCAGGTCCGGAAAGATCTGTG     840
 L  Q  A  P  S  R  E  E  A  A  K  W  S  Q  V  R  K  D  L  C

CTCTTTGAAGGTCTCTCTGCAGCTGCGGGGGGAGGATGGCAGTGTCTGGAACTACAAACC     900
 S  L  K  V  S  L  Q  L  R  G  E  D  G  S  V  W  N  Y  K  P

CCCAGCCGACAGTGGCGGGAAAGAGATCTTCTCCCTGCTGCCCCACATGGCTGACATGTC     960
 P  A  D  S  G  G  K  E  I  F  S  L  L  P  H  M  A  D  M  S

AACCTACATGTTCAAAGGCATCATCAGCTTTGCCAAAGTCATCTCCTACTTCAGGGACTT    1020
 T  Y  M  F  K  G  I  I  S  F  A  K  V  I  S  Y  F  R  D  L
```

FIG.5A

GCCCATCGAGGACCAGATCTCCCTGCTGAAGGGGGCCGCTTTCGAGCTGTGTCAACTGAG 1080
P I E D Q I S L L K G A A F E L C Q L R

ATTCAACACAGTGTTCAACGCGGAGACTGGAACCTGGGAGTGTGGCCGGCTGTCCTACTG 1140
F N T V F N A E T G T W E C G R L S Y C

CTTGGAAGACACTGCAGGTGGCTTCCAGCAACTTCTACTGGAGCCCATGCTGAAATTCCA 1200
L E D T A G G F Q Q L L L E P M L K F H

CTACATGCTGAAGAAGCTGCAGCTGCATGAGGAGGAGTATGTGCTGATGCAGGCCATCTC 1260
Y M L K K L Q L H E E E Y V L M Q A I S

CCTCTTCTCCCCAGACCGCCCAGGTGTGCTGCAGCACCGCGTGGTGGACCAGCTGCAGGA 1320
L F S P D R P G V L Q H R V V D Q L Q E

GCAATTCGCCATTACTCTGAAGTCCTACATTGAATGCAATCGGCCCCAGCCTGCTCATAG 1380
Q F A I T L K S Y I E C N R P Q P A H R

GTTCTTGTTCCTGAAGATCATGGCTATGCTCACCGAGCTCCGCAGCATCAATGCTCAGCA 1440
F L F L K I M A M L T E L R S I N A Q H

CACCCAGCGGCTGCTGCGCATCCAGGACATACACCCCTTTGCTACGCCCCTCATGCAGGA 1500
T Q R L L R I Q D I H P F A T P L M Q E

GTTGTTCGGCATCACAGGTAGCTGAGCGGCTGCCCTTGGGTGACACCTCCGAGAGGCAGC 1560
L F G I T G S (SEQ ID NO:18)

CAGACCCAGAGCCCTCTGAGCCGCCACTCCCGGGCCAAGACAGATGGACACTGCCAAGAG 1620

CCGACAATGCCCTGCTGGCCTGTCTCCCTAGGGAATTCCTGCTATGACAGCTGGCTAGCA 1680

TTCCTCAGGAAGGACATGGGTGCCCCCCACCCCCAGTTCAGTCTGTAGGGAGTGAAGCCA 1740

CAGATTCTTACGTGGAGAGTGCACTGACCTGTAGGTCAGGACCATCAGAGAGGCAAGGTT 1800

GCCCTTTCCTTTTAAAAGGCCCTGTGGTCTGGGGAGAAATCCCTCAGATCCCACTAAAGT 1860

GTCAAGGTGTGGAAGGGACCAAGCGACCAAGGATAGGCCATCTGGGGTCTATGCCCACAT 1920

ACCCACGTTTGTTCGCTTCCTGAGTCTTTTCATTGCTACCTCTAATAGTCCTGTCTCCCA 1980

CTTCCCACTCGTTCCCCTCCTCTTCCGAGCTGCTTTGTGGGCTCCAGGCCTGTACTCATC 2040

GGCAGGTGCATGAGTATCTGTGGGAGTCCTCTAGAGAGATGAGAAGCCAGGAGGCCTGCA 2100

CCAAATGTCAGAAGCTTGGCATGACCTCATTCCGGCCACATCATTCTGTGTCTCTGCATC 2160

CATTTGAACACATTATTAAGCACCGATAATAGGTAGCCTGCTGTGGGGTATACAGCATTG 2220

FIG.5B

ACTCAGATATAGATCCTGAGCTCACAGAGTTTATAGTTAAAAAAACAAACAGAAACACAA 2280

ACAATTTGGATCAAAAGGAGAAATGATAAGTGACAAAAGCAGCACAAGGAATTTCCCTGT 2340

GTGGATGCTGAGCTGTGATGGCGGGCACTGGGTACCCAAGTGAAGGTTCCCGAGGACATG 2400

AGTCTGTAGGAGCAAGGGCACAAACTGCAGCTGTGAGTGCGTGTGTGTGATTTGGTGTAG 2460

GTAGGTCTGTTTGCCACTTGATGGGGCCTGGGTTTGTTCCTGGGGCTGGAATGCTGGGTA 2520

TGCTCTGTGACAAGGCTACGCTGACAATCAGTTAAACACACCGGAGAAGAACCATTTACA 2580

TGCACCTTATATTTCTGTGTACACATCTATTCTCAAAGCTAAAGGGTATGAAAGTGCCTG 2640

CCTTGTTTATAGCCACTTGTGAGTAAAAATTTTTTTGCATTTTCACAAATTATACTTTAT 2700

ATAAGGCATTCCACACCTAAGAACTAGTTTTGGGAAATGTAGCCCTGGGTTTAATGTCAA 2760

ATCAAGGCAAAAGGAATTAAATAATGTACTTTTGGCTAGAGGGGTAAACTTTTTTGGCCT 2820

TTTTCTGGGGAAAATAATGTGGGGGTGTGG (SEQ ID NO:17) 2850

FIG.5C

1 MTVTRTHHEK EGSLRAPAIP LHSAAAELAS NHPRGPEANL EVRPKESWNH

51 ADFVHCEDTE SVPGKPSVNA DEEVGGPQIC RVCGDKATGY HFNVMTCEGC

101 KGFFRRAMKR NARLRCPFRK GACEITRKTR RQCQACRLRK CLESGMKKEM

151 IMSDEAVEER RALIKRKKSE RTGTQPLGVQ GLTEEQRMMI RELMDAQMKT

201 FDTTFSHFKN FRLPGVLSSG CELPESLQAP SREEAAKWSQ VRKDLCSLKV

251 SLQLRGEDGS VWNYKPPADS GGKEIFSLLP HMADMSTYMF KGIISFAKVI

301 SYFRDLPIED QISLLKGAAF ELCQLRFNTV FNAETGTWEC GRLSYCLEDT

351 AGGFQQLLLE PMLKFHYMLK KLQLHEEEYV LMQAISLFSP DRPGVLQHRV

901 VDQLQEQFAI TLKSYIECNR PQPAHRFLFL KIMAMLTELR SINAQHTQRL

451 LRIQDIHPFA TPLMQELFGI TGS (SEQ ID NO:18)

FIG.6